

REMARKS

Claims 38-49 are currently pending in the subject application, and are presently under consideration. Claims 38-49 are rejected. Claims 38-49 have been cancelled. New claims 50-70 have been added. Favorable reconsideration of the application is requested in view of the amendments and comments herein.

I. Rejection of Claims 38, 41, 44, and 47 Under 35 U.S.C. §102(b)

Claims 38, 41, 44, and 47 stand rejected under 35 U.S.C. §102 as being anticipated by U.S. Patent No. 5,539,730 to Dent ("Dent"). Claims 38, 41, 44, and 47 have been cancelled, thus rendering this rejection moot.

II. Rejection of Claims 39, 40, 42, 43, 45, 46, 48, and 49 Under 35 U.S.C. §103(a)

Claims 39, 40, 42, 43, 45, 46, 48, and 49 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Dent in view of U.S. Patent No. 6,016,311 to Gilbert, et al. ("Gilbert"). Claims 39, 40, 42, 43, 45, 46, 48, and 49 have been cancelled, thus rendering this rejection moot.

III. New claims 50-70

New claim 50 recites a communication system that comprises a satellite, a plurality of user terminals, each of the plurality of user terminals being operative to communicate with the satellite, a gateway being operative to communicate with the satellite, and a controller operative to dynamically and asymmetrically assign uplink bandwidth between the plurality of user terminals and the gateway via a signaling channel, the signaling channel being transmitted from the controller to the plurality of user terminals and to the gateway via the satellite. None of the cited art teaches or suggests new claim 50. Consideration and allowance of new claim 50, as well as new claims 51-55 which depend therefrom, is respectfully requested.

New claim 51 recites that the controller dynamically assigns the uplink bandwidth based on a ratio of outbound to inbound communication traffic, a utilization efficiency of uplinks associated with the plurality of user terminals and the gateway, a utilization efficiency of

downlinks associated with the plurality of user terminals and the gateway, a ratio of relative capacity of the uplinks associated with the plurality of user terminals and the gateway to the downlinks associated with the plurality of user terminals and the gateway, and a number of available uplinks and available downlinks. None of the cited art teaches or suggests new claim 51. Consideration and allowance of new claim 51 is respectfully requested.

New claim 52 recites that the controller is further operative to monitor communication traffic flow between the gateway and the plurality of user terminals, the controller dynamically assigning the uplink bandwidth based on an evaluation of the monitored communication traffic flow. None of the cited art teaches or suggests new claim 52. Consideration and allowance of new claim 52 is respectfully requested.

New claim 53 recites that the controller assigns a plurality of uplinks to the plurality of user terminals and to the gateway for communication with the satellite, each of the plurality of uplinks having an associated bandwidth. None of the cited art teaches or suggests new claim 53. Consideration and allowance of new claim 53 is respectfully requested.

New claim 54 recites that the controller assigns a portion of the plurality of uplinks to the plurality of user terminals and a remaining portion of the plurality of uplinks to the gateway based on a determination of an optimal allocation of the plurality of uplinks. None of the cited art teaches or suggests new claim 54. Consideration and allowance of new claim 54 is respectfully requested.

New claim 55 recites that each of the plurality of uplinks comprises a plurality of sub-channels, such that a portion of the plurality of sub-channels of a given one of the plurality of uplinks is assigned to at least one of the plurality of user terminals and a remaining portion of the plurality of sub-channels is assigned to the gateway. None of the cited art teaches or suggests new claim 55. Consideration and allowance of new claim 55 is respectfully requested.

New claim 56 recites a method for establishing communications with a satellite, the method comprising monitoring communication traffic flow between a gateway and a plurality of user terminals, determining an optimal allocation of uplink bandwidth between the gateway and the plurality of user terminals based on an evaluation of the monitored communication traffic

flow, assigning a first portion of the uplink bandwidth dynamically to the gateway, and assigning a second portion of the uplink bandwidth dynamically to the plurality of user terminals. None of the cited art teaches or suggests new claim 56. Consideration and allowance of new claim 56, as well as new claims 57-61 which depend therefrom, is respectfully requested.

New claim 57 recites transmitting a signaling channel to the plurality of user terminals and to the gateway via the satellite, the signaling channel comprising the assignment of the first and second portions of the uplink bandwidth. None of the cited art teaches or suggests new claim 57. Consideration and allowance of new claim 57 is respectfully requested.

New claim 58 recites determining the optimal allocation of the uplink bandwidth based on a ratio of outbound to inbound communication traffic, a utilization efficiency of uplinks associated with the plurality of user terminals and the gateway, a utilization efficiency of downlinks associated with the plurality of user terminals and the gateway, a ratio of relative capacity of the uplinks associated with the plurality of user terminals and the gateway to the downlinks associated with the plurality of user terminals and the gateway, and a number of available uplinks and available downlinks. None of the cited art teaches or suggests new claim 58. Consideration and allowance of new claim 58 is respectfully requested.

New claim 59 recites assigning a plurality of uplinks to the plurality of user terminals and to the gateway for communication with the satellite, each of the plurality of uplinks having an associated bandwidth. None of the cited art teaches or suggests new claim 59. Consideration and allowance of new claim 59 is respectfully requested.

New claim 60 recites assigning a portion of the plurality of uplinks to the plurality of user terminals and assigning a remaining portion of the plurality of uplinks to the gateway based on the determined optimal allocation of the uplink bandwidth. None of the cited art teaches or suggests new claim 60. Consideration and allowance of new claim 60 is respectfully requested.

New claim 61 recites that the plurality of uplinks comprises a plurality of sub-channels, and also recites assigning a portion of the plurality of sub-channels of a given one of the plurality of uplinks to at least one of the plurality of user terminals, and assigning a remaining portion of

the plurality of sub-channels to the gateway. None of the cited art teaches or suggests new claim 61. Consideration and allowance of new claim 61 is respectfully requested.

New claim 62 recites a communication system that comprises a satellite, a plurality of user terminals, each of the plurality of user terminals being operative to communicate with the satellite, a gateway being operative to communicate with the satellite, and a controller operative to dynamically assign a plurality of uplinks to the plurality of user terminals and to the gateway for communication with the satellite, each of the plurality of uplinks having an associated bandwidth, such that a portion of the plurality of uplinks is assigned to the plurality of user terminals and a remaining portion of the plurality of uplinks is assigned to the gateway, the assignment being based on a determination of an optimal allocation of the plurality of uplinks. None of the cited art teaches or suggests new claim 62. Consideration and allowance of new claim 62, as well as new claims 63-66 which depend therefrom, is respectfully requested.

New claim 63 recites that controller is further operative to transmit the assignment of the plurality of uplinks via a signaling channel, the signaling channel being transmitted from the controller to the plurality of user terminals and to the gateway via the satellite. None of the cited art teaches or suggests new claim 63. Consideration and allowance of new claim 63 is respectfully requested.

New claim 64 recites that the controller dynamically assigns the plurality of uplinks based on a ratio of outbound to inbound communication traffic, a utilization efficiency of the plurality of uplinks, a utilization efficiency of downlinks associated with the plurality of user terminals and the gateway, a ratio of relative capacity of the plurality of uplinks to the downlinks associated with the plurality of user terminals and the gateway, and a number of available uplinks and available downlinks. None of the cited art teaches or suggests new claim 64. Consideration and allowance of new claim 64 is respectfully requested.

New claim 65 recites that the controller is further operative to monitor communication traffic flow between the gateway and the plurality of user terminals, the controller dynamically assigning the plurality of uplinks based on an evaluation of the monitored communication traffic

flow. None of the cited art teaches or suggests new claim 65. Consideration and allowance of new claim 65 is respectfully requested.

New claim 66 recites that each of the plurality of uplinks comprises a plurality of sub-channels, such that a portion of the plurality of sub-channels of a given one of the plurality of uplinks is assigned to at least one of the plurality of user terminals and a remaining portion of the plurality of sub-channels is assigned to the gateway. None of the cited art teaches or suggests new claim 66. Consideration and allowance of new claim 66 is respectfully requested.

New claim 67 recites a communication system that comprises means for determining an optimal allocation of uplink bandwidth between a gateway and a plurality of user terminals based on at least one of a ratio of outbound to inbound communication traffic, a utilization efficiency of uplinks associated with the plurality of user terminals and the gateway, a utilization efficiency of downlinks associated with the plurality of user terminals and the gateway, a ratio of relative capacity of the uplinks associated with the plurality of user terminals and the gateway to the downlinks associated with the plurality of user terminals and the gateway, and a number of available uplinks and available downlinks; and means for dynamically assigning a first portion of the uplink bandwidth to the gateway and for dynamically assigning a second portion of the uplink bandwidth to the plurality of user terminals for communicating with a satellite. None of the cited art teaches or suggests new claim 67. Consideration and allowance of new claim 67, as well as new claims 68-70 which depend therefrom, is respectfully requested.

New claim 68 recites means for determining an optimal allocation of a plurality of uplinks between the gateway and the plurality of user terminals, the means for dynamically assigning the uplink bandwidth assigning a portion of the plurality of uplinks to the plurality of user terminals and a remaining portion of the plurality of uplinks to the gateway based on the determination of the optimal allocation of the plurality of uplinks. None of the cited art teaches or suggests new claim 68. Consideration and allowance of new claim 68 is respectfully requested.

New claim 69 recites means for determining an optimal allocation of a plurality of uplinks between the gateway and the plurality of user terminals, the means for dynamically

assigning the uplink bandwidth assigning a portion of the plurality of uplinks to the plurality of user terminals and a remaining portion of the plurality of uplinks to the gateway based on the determination of the optimal allocation of the plurality of uplinks. None of the cited art teaches or suggests new claim 69. Consideration and allowance of new claim 69 is respectfully requested.

New claim 70 recites that each of the plurality of uplinks comprises a plurality of sub-channels, such that a portion of the plurality of sub-channels of a given one of the plurality of uplinks is assigned to at least one of the plurality of user terminals and a remaining portion of the plurality of sub-channels is assigned to the gateway. None of the cited art teaches or suggests new claim 70. Consideration and allowance of new claim 70 is respectfully requested.

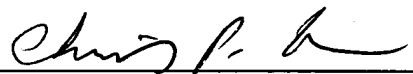
CONCLUSION

In view of the foregoing remarks, Applicant respectfully submits that the present application is in condition for allowance. Applicant respectfully requests reconsideration of this application and that the application be passed to issue.

Please charge any deficiency or credit any overpayment in the fees for this amendment to our Deposit Account No. 20-0090.

Respectfully submitted,

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